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Filed : April 14, 2005

REMARKS

Claim 6 has been amended to clarify the claimed invention. Support for the coating amount of 0.0091 g/m<sup>2</sup> or less can be found in Examples 1-6, page 22 line 1 through page 23 line 18, for example. Support for a pH value of less than 7 can be found on page 6 lines 15-30, and also page 1 lines 20-25 (the background section), for example. Support for a starch, a cellulose, a polyvinyl alcohol, a polyacrylamide, or sodium alginate can be found on page 13 lines 24-28, for example. Claim 14 has been canceled without prejudice.

No new matter has been added. Applicant respectfully requests entry of the amendments and reconsideration of the application in view of the amendments and the following remarks.

Rejection of Claims 3-6, 9, 11-14, 16-20, and 22 Under 35 U.S.C. § 103

Claims 3-6, 9, 11-14, 16-20, and 22 have been rejected under 35 U.S.C. § 103(a) as being unpatentable over Asahi (JP55-039329A) in view of Ricoh (JP59-174850A) and Mitsui (JP10-298295A). Claim 14 has been canceled without prejudice. Claim 6 is independent and has been amended to recite, among others:

said slipping property imparting agent comprising:

(i) a copolymer whose constituents are unsaturated olefin (constituent (a)) and unsaturated carboxylic acid (carboxylate) (constituent (b)), and

(ii) a starch, a cellulose, a polyvinyl alcohol, a polyacrylamide, or sodium alginate,

wherein said copolymer contains 50 to 99 mol percent of constituent (a) and 50 to 1 mol percent of constituent (b) to the total mol number of constituents (a) and (b) combined, wherein the copolymer has a number-average molecular weight is 500-50,000,

wherein said slipping property imparting agent is a clear coat applied in an amount of 0.0091 g/m<sup>2</sup> or less by solid content per both sides and has a pH value of less than 7.

The Office action states that blocking resistance is “understood to be synonymous with ‘slipping properties’.” However, as previously explained, “blocking” is “undesirable sticking together of painted surfaces when pressed together **under normal conditions**” (emphasis added) (“Blocking” - Coating Guide -- Paint Defects, <http://cage.rti.org/glossary.cfm?cat=Patent+Defects>, 2006/10/13, previously submitted as Exhibit C). In contrast, “slipping property” in the present application means reduction of the friction coefficient of a printing paper (and also inhibiting production of an agglutinated product called scum) in paper production processes (see page 1, line 26, through page

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2, line 15, in the present application). Thus, in the art, blocking is unrelated to paper production processes, and sticking under normal conditions is also unrelated to friction coefficient in paper production. The Office action's above interpretations of "blocking resistance" and "slipping properties" are not consistent with the above evidence and the disclosure of the instant specification.

The Office action states that Asahi does not teach the claimed coating weight, but Ricoh teaches an **anti-blocking** metal ionized ethylene acrylic acid copolymer, wherein the coating is applied to a paper substrate in amounts of **0.2-0.7 g/m<sup>2</sup>**. In contrast, claim 6 recites, among others, "**said slipping property imparting agent is ... in an amount of 0.0091 g/m<sup>2</sup> or less.**"

In *Optivus Technology, Inc. v. Loma Linda University Medical Center* (469 F.3d 978 (2006 U.S. App.)), the Court noted that "[a] reference may be said to **teach away** when a person of ordinary skill, upon reading the reference, would be discouraged from following the path set out in the reference, or would be led in a direction divergent from the path that was taken by the applicant." Based on that test, Ricoh teaches away from "**said slipping property imparting agent is ... in an amount of 0.0091 g/m<sup>2</sup> or less**" recited in claim 6 because Ricoh specifically states **0.2-0.7 g/m<sup>2</sup> for anti-blocking**, and thus the ordinary skilled artisan would be discouraged from using **0.0091 g/m<sup>2</sup> or less** for anti-blocking. Ricoh does not teach slipping properties, and anti-blocking and slipping properties are different functions, and thus, significant improvements on slipping properties and prevention of scum generation (e.g., shown in Table 2 on page 24) exhibited by **0.0091 g/m<sup>2</sup> or less** of the slipping property imparting agent **cannot** be predictable based on the teachings of Asahi and Ricoh, alone or combined.

Further, the Office Action states that Asahi does not teach the desired pH of the composition, but Mitsui teaches the pH should be **greater than 7** to control the gelling of the composition (0012). However, claim 6 recites, among others, "**a pH value of less than 7**". In the claimed invention, due to the slipping property imparting agent, its pH need not be greater than 7 and even when its pH is less than 7, scum production can effectively be inhibited (e.g., page 6 lines 15-30). Thus, Mitsui teaches away from "**a pH value of less than 7**" recited in claim 6 because Mitsui specifically states that the pH should be **greater than 7** to control the gelling of the composition (0012), and accordingly, the ordinary skilled artisan would be discouraged from using **a pH value of less than 7**.

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Additionally, claim 6 has been amended to incorporate the limitation of “said slipping property imparting agent comprising ... a starch, a cellulose, a polyvinyl alcohol, a polyacrylamide, or sodium alginate”. This additional element further supports the significance of a pH of less than 7. In the conventional composition, if starch is used as a clear coating material, scum is generated in coating processes (page 1, lines 20-25 of the instant specification). In contrast, due to the slipping property imparting agent, no scum is generated (as shown in Table 2 on page 24).

In view of the above, the claimed invention of claim 6 yields far more than predictable results, claim 6 could not be obvious over Asahi, Ricoh, and Mitsui, alone or combined. The remaining claims depend ultimately from claim 6, and at least for this reason, the remaining claims also cannot be obvious over the references. Applicant respectfully requests withdrawal of this rejection.

Rejection of Claims 3-6, 9, 11-14, 16-20, and 22 Under 35 U.S.C. § 103

Claims 3-6, 9, 11-14, 16-20, and 22 have been rejected under 35 U.S.C. § 103(a) as being unpatentable over Sumitomo (JP51-04330A) in view of Ricoh (JP59-174850A) and Mitsui (JP10-298295A).

Similar to the above remarks, Sumitomo, Ricoh, and Mitsui fail to disclose the coating amount recited in claim 6 as amended herein. Further, none of the references gives any indication of the pH value to be less than 7. At least for the above reasons, claim 6 and its dependent claims cannot be obvious over the references. Applicant respectfully requests withdrawal of this rejection.

Rejection of Claims 3-6, 9, 11-14, 16-20, and 22 Under 35 U.S.C. § 103

Claims 3-6, 9, 11-14, 16-20, and 22 have been rejected under 35 U.S.C. § 103(a) as being unpatentable over Asahi (JP55-040835) in view of Ricoh (JP59-174850A) and Mitsui (JP10-298295A).

Similar to the above remarks, Asahi, Ricoh, and Mitsui fail to disclose the coating amount recited in claim 6 as amended herein. Further, none of the references gives any indication of the pH value to be no more than 7. At least for the above reasons, claim 6 and its dependent claims

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cannot be obvious over the references. Applicant respectfully requests withdrawal of this rejection.

**Rejection of Claims 3-6, 9, 11-14, 16-20, and 22 Under 35 U.S.C. § 103**

Claims 3-6, 9, 11-14, 16-20, and 22 have been rejected under 35 U.S.C. § 103(a) as being unpatentable over Mitsui (JP10-298295A) in view of Ricoh (JP59-174850A).

Similar to the above remarks, Mitsui and Ricoh fail to disclose the coating amount recited in claim 6 as amended herein. Further, none of the references gives any indication of the pH value to be no more than 7. At least for the above reasons, claim 6 and its dependent claims cannot be obvious over the references. Applicant respectfully requests withdrawal of this rejection.

**Rejection of Claim 21 Under 35 U.S.C. § 103**

Claim 21 has been rejected under 35 U.S.C. § 103(a) as being unpatentable over any of the above rejections and further in view of Toyada (JP2003-183453A).

Claim 21 depends ultimately from claim 6. At least for this reason, claim 21 also cannot be obvious over the references. Applicant respectfully requests withdrawal of this rejection.

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**CONCLUSION**

In light of the Applicant's amendments to the claims and the foregoing Remarks, it is respectfully submitted that the present application is in condition for allowance. Should the Examiner have any remaining concerns which might prevent the prompt allowance of the application, the Examiner is respectfully invited to contact the undersigned at the telephone number appearing below.

Please charge any additional fees, including any fees for additional extension of time, or credit overpayment to Deposit Account No. 11-1410.

Respectfully submitted,

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